

**AN ADAPTIVE HYBRID RETRANSMISSION METHOD FOR
WIRELESS COMMUNICATIONS**

Abstract of the Disclosure

- 5 An adaptive incremental redundancy (i.e., Hybrid ARQ) method is described for retransmitting information in a communication channel of a wireless communication system. More specifically, code multiplexing is used within fixed length frames in order to change the number of codes, modulation, and coding on retransmissions to provide the desired redundancy for successful decoding. The
- 10 operation of adaptive Hybrid ARQ in the code domain also provides finer granularity in which to efficiently transmitting redundancy. In one illustrative embodiment, a method for retransmitting information in a communication channel having a plurality of fixed length frames each divided into a plurality of time slots of equal duration includes the step of code multiplexing a retransmission of a previous transmission
- 15 within one of the fixed length frames using one or more of a plurality of codes. The number of codes used for the retransmission is variable based on the condition of the communication channel.

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